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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,033	09/05/2003	Ron L. House	2217/SPRI.103013	8464

32423 7590 12/18/2006

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EXAMINER	
WATT, CHRIS A	
ART UNIT	PAPER NUMBER
2174	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/18/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/656,033	HOUSE ET AL.	
	Examiner	Art Unit	
	Chris Watt	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Planas et al. ("Planas" US Patent No. 6,112,015) in view of LeBlanc ("LeBlanc" US Patent No. 5,570,412) and Perry et al. ("Perry" US Patent No. 7,020,696).

Regarding independent claim 1, Planas teaches a method for maintaining (i.e. col. 1 lines 48-51 of Planas : " The intent of the generic states is to allow network objects which are compliant with these standards to be maintainable remotely by non-vendor specific network management tools") and graphically displaying (i.e. col. 4 lines 58-62 of Planas : " A processor (not shown) forming part of each network management terminal receives the network management information, processes it, and presents it graphically on a display (not shown) with the GUI according to the invention") geographic (i.e. col. 6 lines 42-44 of Planas : " The grouping of elements may be based on geographic and/or other administrative criteria, for example") information (i.e. col. 14 lines 19-23 of Planas : "20, a flowchart is shown of the logic followed by the GUI in updating displayed state and status information when a change in a state or status occurs for any network object forming part of a network being graphically represented according to the invention") regarding the location (i.e. col. 15 lines 52-55 of Planas : "

For instance as new network objects are added and pop up in the GNE's top level view, they need to be situated in an appropriate location relative to the existing network object icons") of telecommunication cable (i.e. col. 6 lines 30-32 of Planas : "a symbolic node icon 56 for a coaxial node with link bundle icons 60,64 connecting these elements to node icons 44, 52 respectively") and determining the relative geographic distance from telecommunication cable to user-selected nodes (i.e. col. 16 lines 61-62 of Planas : "21d, the operator has selected node icon 220 and then selected "Test 1" from a "Tests" menu"), the method comprising: receiving geographic information (i.e. col. 6 lines 60-62 of Planas : " The shape of the container icon may be manipulated so that it conforms to specific geographic or other administrative requirements or criteria") in a computer readable form sufficient to generate an electronic map (i.e. col. 6 lines 62-64 of Planas : " The container icons may be displayed transparently or translucently over a map of familiar geography for improved recognition") of the metropolitan area (i.e. col. 17 lines 41-43 of Planas : " A basic node icon 300 for a transport node is shown, and further identified by its location in Toronto"), receiving vendor information in a computer readable form for at least one vendor who owns telecommunication cable in the metropolitan area (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment"), the vendor information comprising: the location (i.e. col. 11 lines 62-64 of Planas : " As a result, modifier icons should ideally be positioned in locations that would not obliterate these distinguishing characteristics") of telecommunication cable in the metropolitan area (i.e. col. 4 lines 17-19 of Planas : " Links connect nodes together and

include copper wire links, microwave links, satellite links, coaxial links and optical fibre links for example"), the owner of the telecommunication cable (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment") , the locations of nodes associated with the telecommunication cable (i.e. col. 11 lines 62-64 of Planas : " As a result, modifier icons should ideally be positioned in locations that would not obliterate these distinguishing characteristics") and the types of nodes associated with the telecommunication cable (i.e. col. 5 lines 52-54 of Planas : " Links between two nodes are shown by link icons connecting the nodes and having a link type specifier icon in the centre of the link icon"), providing a graphical user interface (i.e. col. 4 lines 58-62 of Planas : " A processor (not shown) forming part of each network management terminal receives the network management information, processes it, and presents it graphically on a display (not shown) with the GUI according to the invention") permitting the user to select (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information") at least one vendor from the at least one vendors who own telecommunication cable in the metropolitan area (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment") and at least one node from the at least one nodes of the types associated with telecommunication cable in the metropolitan area (i.e. col. 16 lines 61-62 of Planas : "21d, the operator has selected node icon 220 and then selected "Test 1" from a "Tests" menu"), receiving user input (i.e. col. lines of Planas : " The method according to claim 1 further

comprising the steps of: receiving network management information") selecting at least one of the vendors who own telecommunication cable in the metropolitan area (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment"), generating a display layer graphically illustrating (i.e. col. 3 lines 15-16 of Planas : "4a is an example representation of a simple network using the symbols and icons of FIGS") the metropolitan area (i.e. col. 17 lines 41-43 of Planas : " A basic node icon 300 for a transport node is shown, and further identified by its location in Toronto"), generating a display layer graphically illustrating the vendor information for the telecommunication cable of each of the vendors selected by the user (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment") , displaying the display layer graphically illustrating the metropolitan area (i.e. col. 6 lines 62-64 of Planas : " The container icons may be displayed transparently or translucently over a map of familiar geography for improved recognition"), and the display layers graphically illustrating the vendor information for the telecommunication cable of each of the least one vendors selected by the user (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment"), receiving user input selecting at least one of the nodes in the metropolitan area (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), calculating the distance from each of the at least one user-selected nodes to the at least one user-selected telecommunication

cable from the metropolitan area, and displaying the calculation results of the distance to each of the at least one user-selected nodes to the nearest user-selected telecommunication cable (i.e. col. 15 lines 52-55 of Planas : " For instance as new network objects are added and pop up in the GNE's top level view, they need to be situated in an appropriate location relative to the existing network object icons"). Planas doesn't teach the calculation of distance and location of cables and nodes on a network, or that such calculations are executed in computer readable form.

LeBlanc teaches the calculation (i.e. col. 19 lines 44-47 of LeBlanc : " The bands are determined by calculating the average of a certain number of data points plus and minus two times the standard deviation of the data") of location of (i.e. col. 7 lines 48-52 of LeBlanc : " In carrying out these and other objects, features and advantages of the present invention, a system and method for updating the location databank is provided and is directed specifically for use in cooperation with a location system and method"; col. 7 lines 59-63 of LeBlanc : " Each of the update centers includes means for transmitting its own pre-calibrated location information to the location databank") and distance between various network elements (i.e. col. 25 lines 6-8 of LeBlanc : " The location band 170 is what will be used to generate (for the location databank) minimum and maximum distances for any valid values of any of the parameters"; col. 21 lines 14-16 of LeBlanc : " the second table will provide a predicted distance value, along with a minimum and maximum boundary") on a telecommunication network. It would have been obvious to an artisan at the time of the invention to combine the location of and distance between various network elements taught by LeBlanc with the graphical

display of Planas creating a system "which provides the control logic for terminal authentication, location management" (col. 3 lines 47-48 of LeBlanc).

Perry teaches data maintained in computer readable form (i.e. col. 65 lines 9-10 of Perry : " Preferably, the data is maintained in binary form"; col. 75 lines 25-26 of Perry : " In one embodiment, instructions within templates are written in ASCII text to be human readable"). It would have been obvious to an artisan at the time of the invention to combine the data maintained in computer readable form taught by Perry with the graphic display of location and distance taught by LeBlanc and Planas "to keep the data files smaller than translating it into other forms such as ASCII" (col. 65 lines 9-10 of Perry).

Regarding dependent claim 2, see the analysis of claim 1 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 1 wherein generating display layers graphically illustrating the vendor information for the telecommunication cable of each of the vendors selected by the user further comprises: generating a graphical representation (i.e. col. 4 lines 58-62 of Planas : " A processor (not shown) forming part of each network management terminal receives the network management information, processes it, and presents it graphically on a display (not shown) with the GUI according to the invention") of the geographical location of the telecommunication cable owned by the selected vendors (i.e. col. 12 lines 15-17 of Perry : " to provide the convenience of a network map, event aggregation/filtering, and integration with other vendor's networking"), and generating a graphical representation (i.e. col. 4 lines 58-62 of Planas : " A processor (not shown) forming part of each

network management terminal receives the network management information, processes it, and presents it graphically on a display (not shown) with the GUI according to the invention") of the geographical locations of nodes associated with the telecommunication cable owned by the selected vendors (i.e. col. 12 lines 15-17 of Perry : " to provide the convenience of a network map, event aggregation/filtering, and integration with other vendor's networking").

Regarding dependent claim 3, see the analysis of claim 2 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 2 wherein generating a graphical representation of the geographical locations of nodes further comprises generating a different symbolic representation of each node type (i.e. col. 17 lines 19-21 of Planas : " While particular shapes for the node and link icons have been used in the illustrated and described examples, other shapes could be used with equal effect").

Regarding dependent claim 4, see the analysis of claim 2 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 2 wherein generating a graphical representation of the geographical location of the telecommunication cable owned by the selected vendors (i.e. col. 12 lines 15-17 of Perry : " to provide the convenience of a network map, event aggregation/filtering, and integration with other vendor's networking") further comprises generating a different symbolic representation for the telecommunication cable of each vendor (i.e. col. 15 lines 52-55 of Planas : " For instance as new network objects are added and pop up in

the GNE's top level view, they need to be situated in an appropriate location relative to the existing network object icons").

Regarding dependent claim 5, see the analysis of claim 1 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 1 wherein receiving user input selecting at least one of the vendors who own telecommunication cable in the metropolitan area comprises receiving a prioritized selection of at least two vendors (i.e. col. 12 lines 15-17 of Perry : " to provide the convenience of a network map, event aggregation/filtering, and integration with other vendor's networking"; col. 101 lines 20-24 of Perry : " For example, a network service provider may have a high priority customer on a particular port and may want all errors and events (even minor ones) to be reported to the NMS and displayed to the network manager").

Regarding dependent claim 6, see the analysis of claim 5 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 5 wherein generating display layers graphically illustrating the vendor information comprises generating a different graphical representation of the geographical location of each of the telecommunication cables owned by the at least two prioritized vendor selections of the user (i.e. col. 12 lines 15-17 of Perry : " to provide the convenience of a network map, event aggregation/filtering, and integration with other vendor's networking"; col. 101 lines 20-24 of Perry : " For example, a network service provider may have a high priority customer on a particular port and may want all errors and events (even minor ones) to be reported to the NMS and displayed to the network manager"), and generating a different graphical representation of the geographical locations of nodes

associated with the telecommunication cable owned by the selected vendors (i.e. col. 6 lines 32-34 of Planas : " The node icon 56 for the coaxial node is an example of a symbolic node icon having a different shape").

Regarding dependent claim 7, see the analysis of claim 6 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 6 wherein generating a different graphical representation of the geographical locations of the nodes further comprises generating a different symbolic representation of each node type (i.e. col. 5 lines 19-20 of Planas : " Identification symbols and numbers may be added to the basic icon to identify the type and capacity of the node it represents").

Regarding dependent claim 8, see the analysis of claim 1 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 1 wherein the distances are calculated from each of the at least one user-selected nodes to the nearest of the at least one user-selected telecommunication cables (i.e. col. 17 lines 41-43 of Planas : " A basic node icon 300 for a transport node is shown, and further identified by its location in Toronto").

Regarding dependent claim 9, see the analysis of claim 8 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 8 wherein the calculated distances are displayed numerically in table format and identified by the node identifier of the corresponding node (i.e. col. 40 lines 19-23 of Perry : " Various other graphical representations may be used, for example, bar graphs or pie charts, and instead of graphical representations, the data may be provided in a table or other type of format").

Regarding dependent claim 10, see the analysis of claim 8 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 8 wherein the calculated distances are displayed as illustrated on the display layer graphically illustrating the metropolitan area (i.e. col. 11 lines 5-7 of Planas : " A node which has a primary and a backup unit is illustrated by two node icons one of which is behind the other").

Regarding independent claim 11, BLANK teaches a method for storing (i.e. col. 20 lines 55-63 of Planas : "memory for storing a unique attribute representative of each of a plurality of base states, the attribute being unique independent of colour and for storing a unique modifier icon representative of each of a plurality of supplementary states, the modifier icon being unique independent of colour; wherein the processing means displays on the display for each network object a basic icon representative of that network object"), and graphically displaying (i.e. col. 4 lines 58-62 of Planas : " A processor (not shown) forming part of each network management terminal receives the network management information, processes it, and presents it graphically on a display (not shown) with the GUI according to the invention") information (i.e. col. 14 lines 19-23 of Planas : "20, a flowchart is shown of the logic followed by the GUI in updating displayed state and status information when a change in a state or status occurs for any network object forming part of a network being graphically represented according to the invention") regarding a metropolitan area high bandwidth telecommunication network and calculating the relative geographic distance from user-selected nodes to high bandwidth telecommunication cable (i.e. col. 2 lines 20-30 of Planas : " According to a

first broad aspect, the invention provides a processor implemented method for displaying information relating to a telecommunications network consisting of a plurality of network objects using a network management terminal having a display, the information consisting of a base state for at least one of the network objects, the method comprising the steps of: displaying on the display for each network object a basic icon corresponding to that network object; imparting to the display of each said at least one basic icon an attribute representative of the base state of the corresponding network object"), the method comprising: establishing electronic maps (i.e. col. 6 lines 62-64 of Planas : " The container icons may be displayed transparently or translucently over a map of familiar geography for improved recognition") of a plurality of metropolitan areas (i.e. col. 17 lines 41-43 of Planas : " A basic node icon 300 for a transport node is shown, and further identified by its location in Toronto"), establishing an electronic map of the high bandwidth telecommunication cable (i.e. col. 6 lines 30-32 of Planas : "a symbolic node icon 56 for a coaxial node with link bundle icons 60,64 connecting these elements to node icons 44, 52 respectively") owned by individual vendors in each of the plurality of metropolitan areas (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment") , the maps of the high bandwidth telecommunication cable comprising the geographical location (i.e. col. 4 lines 58-62 of Planas : " A processor (not shown) forming part of each network management terminal receives the network management information, processes it, and presents it graphically on a display (not shown) with the GUI according to the invention") of the high bandwidth

telecommunication cable (i.e. col. 4 lines 17-19 of Plànas : " Links connect nodes together and include copper wire links, microwave links, satellite links, coaxial links and optical fibre links for example") owned by that vendor (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment") in the metropolitan area, and the geographical location of nodes associated with the high bandwidth telecommunication cable owned by that vendor in the metropolitan area (i.e. col. 17 lines 41-43 of Planas : " A basic node icon 300 for a transport node is shown, and further identified by its location in Toronto"), displaying a list of the plurality of metropolitan areas, receiving user input selecting one of the plurality of metropolitan areas (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), displaying a list of vendors who own high bandwidth telecommunication cable in the selected metropolitan area, receiving user input selecting at least one vendor from the list of vendors who own high bandwidth telecommunication cable in the selected metropolitan area (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), displaying a list of nodes of the types associated with high bandwidth telecommunication cable in the selected metropolitan area, receiving user input selecting at least one node of the types associated with high bandwidth telecommunication cable in the selected metropolitan area (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), displaying the electronic map of the selected metropolitan

area (i.e. col. 6 lines 62-64 of Planas : " The container icons may be displayed transparently or translucently over a map of familiar geography for improved recognition"), displaying the electronic maps of the high bandwidth telecommunication cable owned by each of the selected vendors over the map of the selected metropolitan area, receiving user input initiating a calculation of the distance from user-selected nodes to user-selected high bandwidth telecommunication cable in the user-selected metropolitan area (i.e. col. 6 lines 60-62 of Planas : " The shape of the container icon may be manipulated so that it conforms to specific geographic or other administrative requirements or criteria"), and calculating the distance from each of the at least one user-selected nodes of the types associated with telecommunication cable from the metropolitan area to the at least one user-selected telecommunication cable from the metropolitan area. Planas doesn't teach the calculation of distance and location of cables and nodes on a network, or that such calculations are executed in computer readable form.

LeBlanc teaches the calculation (i.e. col. 19 lines 44-47 of LeBlanc : " The bands are determined by calculating the average of a certain number of data points plus and minus two times the standard deviation of the data") of location of (i.e. col. 7 lines 48-52 of LeBlanc : " In carrying out these and other objects, features and advantages of the present invention, a system and method for updating the location databank is provided and is directed specifically for use in cooperation with a location system and method"; col. 7 lines 59-63 of LeBlanc : " Each of the update centers includes means for transmitting its own pre-calibrated location information to the location databank") and

distance between various network elements (i.e. col. 25 lines 6-8 of LeBlanc : " The location band 170 is what will be used to generate (for the location databank) minimum and maximum distances for any valid values of any of the parameters"; col. 21 lines 14-16 of LeBlanc : " the second table will provide a predicted distance value, along with a minimum and maximum boundary") on a telecommunications network. It would have been obvious to an artisan at the time of the invention to combine the location of and distance between various network elements taught by LeBlanc with the graphical display of Planas creating a system "which provides the control logic for terminal authentication, location management" (col. 3 lines 47-48 of LeBlanc).

Perry teaches data maintained in computer readable form (i.e. col. 65 lines 9-10 of Perry : " Preferably, the data is maintained in binary form"; col. 75 lines 25-26 of Perry : " In one embodiment, instructions within templates are written in ASCII text to be human readable"). It would have been obvious to an artisan at the time of the invention to combine the data maintained in computer readable form taught by Perry with the graphic display of location and distance taught by LeBlanc and Planas "to keep the data files smaller than translating it into other forms such as ASCII" (col. 65 lines 9-10 of Perry). Perry further teaches specifically the use of high bandwidth cable (i.e. col. 8 lines 33-37 of Perry : " In one embodiment, the communication bus is a switched Fast Ethernet providing 100 Mb of dedicated bandwidth to each processor allowing the distributed processors to exchange control information at high frequencies").

Regarding dependent claim 12, see the analysis of claim 11 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 11, wherein

displaying a list of vendors who own high bandwidth telecommunication cable in the selected metropolitan area (i.e. col. 12 lines 15-17 of Perry : " to provide the convenience of a network map, event aggregation/filtering, and integration with other vendor's networking"), receiving user input selected at least one vendor from the list of vendors who own high bandwidth telecommunication cable in the selected metropolitan area (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), displaying the electronic map of the selected metropolitan area, and displaying the electronic maps of the high bandwidth telecommunication cable owned by the selected vendors over the map of the selected metropolitan area (i.e. col. 6 lines 62-64 of Planas : " The container icons may be displayed transparently or translucently over a map of familiar geography for improved recognition"), occur simultaneously after receiving user input selecting one of the plurality of metropolitan areas (i.e. col. 45 lines 8-10 of Perry : " As described above, the dynamic bulletin boards allow a network administrator to actively monitor--simultaneously--specific information about one or more operational network devices").

Regarding dependent claim 13, see the analysis of claim 11 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 11, further comprising receiving user input selecting a geographical location (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), and displaying a graphical representative of the selected geographical location over the map of the selected metropolitan area (i.e. col.

6 lines 62-64 of Planas : " The container icons may be displayed transparently or translucently over a map of familiar geography for improved recognition").

Regarding dependent claim 14, see the analysis of claim 13 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 13, wherein receiving user input selecting a geographical location comprises providing a cursor positionable by the user over the map of the selected metropolitan area (i.e. col. 19 lines 39-43 of Perry : " For example, the administrator may use a mouse to move a cursor into an empty portion of graphic window 896b and click the right mouse button to cause a pop-up menu to appear listing the various views available for the network device"), and receiving user input when the cursor is positioned over the geographical location selected by the user (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information").

Regarding dependent claim 15, see the analysis of claim 13 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 13, wherein receiving user input selecting a geographical location comprises receiving a latitude and longitude from a user (i.e. col. 17 lines 43-46 of LeBlanc : " From this information, the latitude and longitude for this center may be calculated 164 and there may be further determined 166 in cooperation with a location databank, the exact street addresses contained within the bounding polygon area").

Regarding dependent claim 16, see the analysis of claim 13 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 13, wherein receiving user input selecting a geographical location comprises receiving a street

address from a user (i.e. col. 17 lines 43-46 of LeBlanc : " From this information, the latitude and longitude for this center may be calculated 164 and there may be further determined 166 in cooperation with a location databank, the exact street addresses contained within the bounding polygon area").

Regarding dependent claim 17, see the analysis of claim 11 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 11, wherein receiving user input selecting at least one node of the types associated with high bandwidth telecommunication cable comprises providing a cursor positionable by the user of the map of the selected metropolitan area (i.e. col. 19 lines 39-43 of Perry : " For example, the administrator may use a mouse to move a cursor into an empty portion of graphic window 896b and click the right mouse button to cause a pop-up menu to appear listing the various views available for the network device"), and receiving user input when the cursor is positioned over the node selected by the user (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information").

Regarding dependent claim 18, see the analysis of claim 11 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 11, wherein receiving user input selecting at least one node of the types associated with high bandwidth telecommunication cable comprises providing a cursor positionable by the user of the map of the selected metropolitan area (i.e. col. 19 lines 39-43 of Perry : " For example, the administrator may use a mouse to move a cursor into an empty portion of graphic window 896b and click the right mouse button to cause a pop-up menu to

appear listing the various views available for the network device"), and receiving user input when the user has created a two-point box enclosing at least one node with the cursor (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information").

Regarding dependent claim 19, see the analysis of claim 11 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 11, wherein receiving user input selecting at least one vendor from the list of vendors who own high bandwidth telecommunication cable in the selected metropolitan area comprises receiving user input selecting a plurality of vendors and ranking the plurality of vendors selected in ascending priority (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), and displaying the electronic maps of the high bandwidth telecommunication cable owned by the selected vendors over the selected metropolitan area comprises displaying the electronic maps of the high bandwidth telecommunication cable owned by the selected vendors in ascending prominence corresponding to the ascending priority given each selected vendor (i.e. col. 6 lines 62-64 of Planas : " The container icons may be displayed transparently or translucently over a map of familiar geography for improved recognition").

Regarding dependent claim 20, see the analysis of claim 11 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 11, wherein displaying the electronic maps of the high bandwidth telecommunication cable owned by the selected vendors over the map of the selected metropolitan area further

comprises displaying a different graphical representation of the high bandwidth telecommunication cable owned by each selected vendor, and displaying a different graphical representation of the nodes associated with the high bandwidth telecommunication cable owned by each selected vendor (i.e. col. 69 lines 12-17 of Perry : " access the corresponding class files from the file system to learn how the data should be presented to a user, for example, how a graphical user interface (GUI) should be displayed, what data and format to display, or perhaps which one of many GUIs should be used").

Regarding dependent claim 21, see the analysis of claim 11 above. LeBlanc and Perry, in combination with Planas further teach the method of claim 11, wherein displaying a different graphical representation of the nodes associated with the high bandwidth telecommunication cable owned by each selected vendor further comprises displaying a different symbolic representation of each form of node in the displayed metropolitan area (i.e. col. 69 lines 12-17 of Perry : " access the corresponding class files from the file system to learn how the data should be presented to a user, for example, how a graphical user interface (GUI) should be displayed, what data and format to display, or perhaps which one of many GUIs should be used").

Regarding dependent claim 22, BLANK teaches a computer-readable medium containing computer-readable code embodied thereon for causing a computer to perform a method of calculating, maintaining (i.e. col. 1 lines 48-51 of Planas : " The intent of the generic states is to allow network objects which are compliant with these standards to be maintainable remotely by non-vendor specific network management

tools"), and displaying (i.e. col. 4 lines 58-62 of Planas : " A processor (not shown) forming part of each network management terminal receives the network management information, processes it, and presents it graphically on a display (not shown) with the GUI according to the invention") information (i.e. col. 14 lines 19-23 of Planas : "20, a flowchart is shown of the logic followed by the GUI in updating displayed state and status information when a change in a state or status occurs for any network object forming part of a network being graphically represented according to the invention") regarding the geographical (i.e. col. 6 lines 42-44 of Planas : " The grouping of elements may be based on geographic and/or other administrative criteria, for example") location (i.e. col. 15 lines 52-55 of Planas : " For instance as new network objects are added and pop up in the GNE's top level view, they need to be situated in an appropriate location relative to the existing network object icons") of high bandwidth telecommunication cable in relation to its associated nodes (i.e. col. 4 lines 17-19 of Planas : " Links connect nodes together and include copper wire links, microwave links, satellite links, coaxial links and optical fibre links for example") within a metropolitan area as a distance (i.e. col. 17 lines 41-43 of Planas : " A basic node icon 300 for a transport node is shown, and further identified by its location in Toronto"), the method comprising receiving and storing electronic information for geographically mapping a plurality of metropolitan areas (i.e. col. 6 lines 60-62 of Planas : " The shape of the container icon may be manipulated so that it conforms to specific geographic or other administrative requirements or criteria"), receiving (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information")

and storing vendor information (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment") for each of the plurality of metropolitan areas (i.e. col. 17 lines 41-43 of Planas : " A basic node icon 300 for a transport node is shown, and further identified by its location in Toronto"), the vendor information comprising the identity of the vendor (i.e. col. 1 lines of 46-48 Planas : " Network objects are products produced by a variety of different vendors and include nodes, links and shelf based equipment"), the location of the high bandwidth telecommunication cable owned by the vendor in each of the plurality of metropolitan areas (i.e. col. 11 lines 62-64 of Planas : " As a result, modifier icons should ideally be positioned in locations that would not obliterate these distinguishing characteristics"), the location of nodes associated with the high bandwidth telecommunication cable owned by the vendor (i.e. col. 15 lines 52-55 of Planas : " For instance as new network objects are added and pop up in the GNE's top level view, they need to be situated in an appropriate location relative to the existing network object icons"), and the type of each node (i.e. col. 5 lines 52-54 of Planas : " Links between two nodes are shown by link icons connecting the nodes and having a link type specifier icon in the centre of the link icon"), providing a graphical user interface that displays information to a user and receives input from a user (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), displaying a list of the plurality of metropolitan areas, receiving user input selecting a metropolitan area (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network

management information"), displaying a geographical map of the selected metropolitan area, displaying a list of the vendors who own high bandwidth telecommunication cable in the selected metropolitan area, receiving user input selecting at least one vendor from the list of vendors who own high bandwidth telecommunication cable in the selected metropolitan area (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), displaying the location of the high bandwidth telecommunication cable owned by the selected vendors over the geographical map of the selected metropolitan area, receiving user input selecting at least one node of the types associated with high bandwidth telecommunication cable in the selected area (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information"), displaying the location of the user-selected nodes associated with high bandwidth telecommunication cable over the geographical map of the selected metropolitan area (i.e. col. 4 lines 58-62 of Planas : " A processor (not shown) forming part of each network management terminal receives the network management information, processes it, and presents it graphically on a display (not shown) with the GUI according to the invention"), calculating the distance from the at least one user-selected node to the at least one user-selected telecommunication cable, and displaying the results of the distance calculation (i.e. col. 2 lines 20-30 of Planas : " According to a first broad aspect, the invention provides a processor implemented method for displaying information relating to a telecommunications network consisting of a plurality of network objects using a network management terminal having a display,

the information consisting of a base state for at least one of the network objects, the method comprising the steps of: displaying on the display for each network object a basic icon corresponding to that network object; imparting to the display of each said at least one basic icon an attribute representative of the base state of the corresponding network object"). Planas doesn't teach the calculation of distance and location of cables and nodes on a network, or that such calculations are executed in computer readable form.

LeBlanc teaches the calculation (i.e. col. 19 lines 44-47 of LeBlanc : " The bands are determined by calculating the average of a certain number of data points plus and minus two times the standard deviation of the data") of location of (i.e. col. 7 lines 48-52 of LeBlanc : " In carrying out these and other objects, features and advantages of the present invention, a system and method for updating the location databank is provided and is directed specifically for use in cooperation with a location system and method"; col. 7 lines 59-63 of LeBlanc : " Each of the update centers includes means for transmitting its own pre-calibrated location information to the location databank") and distance between various network elements (i.e. col. 25 lines 6-8 of LeBlanc : " The location band 170 is what will be used to generate (for the location databank) minimum and maximum distances for any valid values of any of the parameters"; col. 21 lines 14-16 of LeBlanc : " the second table will provide a predicted distance value, along with a minimum and maximum boundary") on a telecommuncation network. It would have been obvious to an artisan at the time of the invention to combine the location of and distance between various network elements taught by LeBlanc with the graphical

display of Planas creating a system "which provides the control logic for terminal authentication, location management" (col. 3 lines 47-48 of LeBlanc).

Perry teaches data maintained in computer readable form (i.e. col. 65 lines 9-10 of Perry : " Preferably, the data is maintained in binary form"; col. 75 lines 25-26 of Perry : " In one embodiment, instructions within templates are written in ASCII text to be human readable"). It would have been obvious to an artisan at the time of the invention to combine the data maintained in computer readable form taught by Perry with the graphic display of location and distance taught by LeBlanc and Planas "to keep the data files smaller than translating it into other forms such as ASCII" (col. 65 lines 9-10 of Perry).

Regarding dependent claim 23, see the analysis of claim 22 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 22, wherein the at least one distance calculated is from each of the at least one user-selected nodes to the nearest of the at least one user-selected telecommunication cables (i.e. col. 15 lines 52-55 of Planas : " For instance as new network objects are added and pop up in the GNE's top level view, they need to be situated in an appropriate location relative to the existing network object icons").

Regarding dependent claim 24, see the analysis of claim 22 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 22, wherein the method performed by a computer executing the computer-readable code embodied on the computer-readable medium further comprises receiving user input designating whether to display nodes (i.e. col. lines of Planas : " The method

according to claim 1 further comprising the steps of: receiving network management information"), and if a user inputs a designation to display nodes, displaying the nodes high bandwidth telecommunication cable for the user-selected associated with the metropolitan area (i.e. col. 43 line 67-col. 44 line 2 of Perry : " As a result, the administrator is able to simultaneously view the normal format while also viewing another format").

Regarding dependent claim 25, see the analysis of claim 24 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 24, location of the high bandwidth telecommunication cable owned by the selected vendors over the wherein displaying the geographical map of the selected metropolitan area further comprises displaying different graphical representations of the high bandwidth telecommunication cable owned by each of the selected vendors (i.e. col. 69 lines 12-17 of Perry : " access the corresponding class files from the file system to learn how the data should be presented to a user, for example, how a graphical user interface (GUI) should be displayed, what data and format to display, or perhaps which one of many GUIs should be used").

Regarding dependent claim 26, see the analysis of claim 24 above. LeBlanc and Perry, in combination with Planas further teach selecting at least the computer-readable medium of claim 24, wherein receiving user input one vendor from the list of vendors who own high bandwidth telecommunication cable in the selected metropolitan area further comprises receiving user input selecting at least two vendors in a priority order from highest to lowest priority (i.e. col. 12 lines 15-17 of Perry : " to provide the

convenience of a network map, event aggregation/filtering, and integration with other vendor's networking"; col. 101 lines 20-24 of Perry : " For example, a network service provider may have a high priority customer on a particular port and may want all errors and events (even minor ones) to be reported to the NMS and displayed to the network manager").

Regarding dependent claim 27, see the analysis of claim 26 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 26, wherein displaying the location of the high bandwidth telecommunication cable owned by the selected vendors over the geographical map of the selected metropolitan area further comprises displaying the location of the high bandwidth telecommunication cable owned by the at least two vendors selected in a priority order in a prominence corresponding with the vendors priority, the highest priority vendor's cable being the most prominent and the lowest priority vendor's cable being the least prominent (i.e. col. 12 lines 15-17 of Perry : " to provide the convenience of a network map, event aggregation/filtering, and integration with other vendor's networking"; col. 101 lines 20-24 of Perry : " For example, a network service provider may have a high priority customer on a particular port and may want all errors and events (even minor ones) to be reported to the NMS and displayed to the network manager").

Regarding dependent claim 28, see the analysis of claim 27 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 27, wherein the method performed by a computer executing the computer-readable code embodied on the computer-readable medium further comprises receiving user

input selecting a physical location within the selected metropolitan area (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information").

Regarding dependent claim 29, see the analysis of claim 28 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 28, wherein receiving user input selecting a physical location within the selected metropolitan area comprises providing a user positionable cursor (i.e. col. 19 lines 39-43 of Perry : " For example, the administrator may use a mouse to move a cursor into an empty portion of graphic window 896b and click the right mouse button to cause a pop-up menu to appear listing the various views available for the network device"), and receiving user input when the cursor is positioned over the position on the display of the geographical map of the metropolitan area corresponding to the physical location to be designated (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information").

Regarding dependent claim 30, see the analysis of claim 28 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 28, wherein receiving user input selecting a physical location within the metropolitan area comprises receiving a latitude and longitude from the user (i.e. col. 17 lines 43-46 of LeBlanc : " From this information, the latitude and longitude for this center may be calculated 164 and there may be further determined 166 in cooperation with a location databank, the exact street addresses contained within the bounding polygon area").

Regarding dependent claim 31, see the analysis of claim 28 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 28, wherein receiving user input selecting a physical location within the metropolitan area comprises receiving a street address from the user (i.e. col. 17 lines 43-46 of LeBlanc : " From this information, the latitude and longitude for this center may be calculated 164 and there may be further determined 166 in cooperation with a location databank, the exact street addresses contained within the bounding polygon area").

Regarding dependent claim 32, see the analysis of claim 22 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 22, wherein the method performed by a computer executing the computer-readable code embodied on the computer-readable medium further comprises displaying the geographic location of the node and high bandwidth telecommunication cable between which the distance was calculated on the electronic map of the selected metropolitan area (i.e. col. 2 lines 20-30 of Planas : " According to a first broad aspect, the invention provides a processor implemented method for displaying information relating to a telecommunications network consisting of a plurality of network objects using a network management terminal having a display, the information consisting of a base state for at least one of the network objects, the method comprising the steps of: displaying on the display for each network object a basic icon corresponding to that network object; imparting to the display of each said at least one basic icon an attribute representative of the base state of the corresponding network object").

Regarding dependent claim 33, see the analysis of claim 32 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 32, wherein receiving user input selecting the node to cable distance calculation result for display of the selected geographical location over the map of the selected metropolitan area comprises providing a user positionable curser (i.e. col. 19 lines 39-43 of Perry : " For example, the administrator may use a mouse to move a cursor into an empty portion of graphic window 896b and click the right mouse button to cause a pop-up menu to appear listing the various views available for the network device"), and receiving user input when the curser is positioned over the position of the calculation results display corresponding to the physical location of the geographical map of the metropolitan area to be designated (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information").

Regarding dependent claim 34, see the analysis of claim 32 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 32, wherein receiving user input selecting the node to cable distance calculation result for display of the selected geographical location over the map of the selected metropolitan area comprises receiving a latitude and longitude of the corresponding node from the user (i.e. col. 17 lines 43-46 of LeBlanc : " From this information, the latitude and longitude for this center may be calculated 164 and there may be further determined 166 in cooperation with a location databank, the exact street addresses contained within the bounding polygon area").

Regarding dependent claim 35, see the analysis of claim 32 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 32, wherein receiving user input selecting the node to cable distance calculation result for display of the selected geographical location over the map of the selected metropolitan area comprises receiving a street address of the corresponding node from the user (i.e. col. 17 lines 43-46 of LeBlanc : " From this information, the latitude and longitude for this center may be calculated 164 and there may be further determined 166 in cooperation with a location databank, the exact street addresses contained within the bounding polygon area").

Regarding dependent claim 36, see the analysis of claim 32 above. LeBlanc and Perry, in combination with Planas further teach the computer-readable medium of claim 32, wherein receiving user input selecting the node to cable distance calculation result for display of the selected geographical location over the map of the selected metropolitan area comprises receiving a node identifying name (i.e. col. lines of Planas : " The method according to claim 1 further comprising the steps of: receiving network management information").

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Watt whose telephone number is (571) 270-1046. The examiner can normally be reached on Monday-Thursday 6:30-4:00 Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 276-5619. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

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\Chris A. Watt\

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December 7, 2006

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